

REMARKS

This application has been carefully reviewed in light of the Office Action dated August 7, 2009. Claims 1, 9 to 11, and 22 to 25 are in the application, with Claim 1 being independent. Reconsideration and further examination are respectfully requested.

Claims 22, 24, and 25 were rejected under 35 U.S.C. § 112, second paragraph. These rejections are respectfully traversed.

With respect to Claim 22, the Office Action asserts that the language “based on expected amounts of the target substances in the solution” is indefinite because the number of probe spots depends upon expected amounts in a solution, which is not part of the claimed carrier, and which is dependent upon the target solution used and can vary between different target solutions. However, Applicant respectfully submits that the probe carrier can be used for simultaneous quantification of two or more genes the expression levels of which are known to be greatly different (e.g., 100 to 1000 times). In such a case, it can be very difficult to simultaneously quantify the amounts of target substances because it can necessitate using a signal detection system with a very wide dynamic range or a plurality of target solutions having different concentrations prepared from the same specimen. See, for example, page 19, lines 15 to 26 of the subject application. Thus, in the instant invention, two or more probes can be immobilized at significantly different amounts (e.g., 100 to 1000 times) among different areas. In this regard, it should be noted that strict adjustment of each component amount is not necessarily required. See page 16, line 22 of the subject application. It is well known that some genes are expressed at much higher levels as compared with other genes in the human body, even though expression levels may vary somewhat depending on the origin of the sample. In view of this, Applicant

respectfully submits that the scope of Claim 22 would be clear to one of ordinary skill in the art.

With respect to Claim 24, the Office Action asserts that the term “practically” is a relative term that renders the claim indefinite. However, as explained above, if the number of probe molecules per spot does not significantly vary among spots, and the difference in the immobilized amount among different probes is substantially realized by the difference in the number of spots rather than the number of probe molecules per spot, it should be deemed to be “practically” equal.

With respect to Claim 25, the Office Action asserts that the language “the number of spots in each of the areas is proportional to an average amount of expression, in a human, of a target gene having a sequence complementary to a respective one of the probes” is indefinite. However, as explained above, the average amounts of expression of some human genes are generally known to one of ordinary skill in the art, even though the expression amount might vary to some extent dependent upon the human. The probe carrier of the instant invention can be used with such genes.

Claims 1 and 10 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,355,419 (Alfenito). Claims 1, 9, 10, and 22 to 24 were rejected under 35 U.S.C. § 102(a,e) over U.S. Publication No. 2004/0115722 (Kronick). Claims 1, 10, and 23 were rejected under 35 U.S.C. § 102(a,e) over U.S. Publication No. 2004/0009512 (Ares). Claims 1, 9, 22, and 24 were rejected under 35 U.S.C. § 103(a) over Alefinito in view of Kronick. Claims 9, 22, and 24 were rejected under 35 U.S.C. § 103(a) over Ares in view of Alefinito and further in view of Kronick. Claims 1 and 11 were rejected under 35 U.S.C. § 103(a) over Alfenito in view of Ares. Claims 1 and 11 were rejected under 35 U.S.C. §

103(a) over Kronick. Claim 11 was rejected under 35 U.S.C. § 103(a) over Ares. Claim 23 was rejected under 35 U.S.C. § 103(a) over Alfenito in view of Ares. Claim 25 was rejected under 35 U.S.C. § 103(a) over Alfenito in view of Ares and further in view of Kronick. Claim 25 was rejected under 35 U.S.C. § 103(a) over Kronick in view of Alfenito. Claim 25 was rejected under 35 U.S.C. § 103(a) over Kronick in view of Ares. Claim 25 was rejected under 35 U.S.C. § 103(a) over Ares in view of Alfenito and further in view of Kronick. Claims 1, 10, and 23 were rejected under 35 U.S.C. § 103(a) over Ares in view of Alfenito. Claim 11 was rejected under 35 U.S.C. § 103(a) over Ares in view of Alfenito. These rejections are respectfully traversed.

Claim 1 recites, *inter alia*, each of the spots was formed by ejecting a corresponding probe solution such that the respective probe solutions have the same concentration and the respective spots have a uniform diameter.

None of Alfenito, Ares, and Kronick, even in the proposed combinations, assuming, *arguendo*, that such could be combined, is seen to disclose or suggest at least the above-discussed feature.

The dependent claims are also submitted to be patentable because they set forth additional aspects of the present invention and are dependent from the independent claim discussed above. Therefore, separate and individual consideration of each dependent claim is respectfully requested.

The application is believed to be in condition for allowance, and a Notice of Allowance is respectfully requested.

No fees are believed due; however, should it be determined that additional fees are required, the Director is hereby authorized to charge such fees to Deposit Account

06-1205.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office by telephone at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,

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